IN THE CLAIMS

1   1. (currently amended) A method of using ultrasound to analyze a media of interest,

2   comprising ~~the steps of~~:

3   transmitting <u>a single set of</u> [an] ultrasound pulse <u>firings</u> into the media of interest, the

4   ultrasound pulse <u>firings</u> being modified by the media of interest;

5   receiving at a transducer the modified ultrasound pulse <u>firings</u>;

6   generating signals in response to the received modified ultrasound pulse <u>firings</u>;

7   parallel processing the signals using a plurality of imaging modes; [[and]]

8   generating positional data responsive to the parallel processed signals<u>; and</u>

9   <u>generating image data using the positional data, the image data having no visible</u>

10   <u>temporal anomalies.</u>

1   2. (currently amended) The method of claim 1, wherein ~~the step of~~ generating positional data

2   includes area-forming.

1   3. (currently amended) A method of using ultrasound to analyze a media of interest,

2   comprising ~~the steps of~~:

3   transmitting a ~~plurality~~ <u>single set</u> of ultrasound pulse <u>firings</u> into the media of interest,

4   the ultrasound ~~pulses~~ <u>pulse firings</u> being modified by the media of interest;

5   receiving at one or more transducers the modified ultrasound ~~pulses~~ <u>pulse firings</u>;

6   generating analog signals in response to the received modified ultrasound ~~pulses~~ <u>pulse</u>

7   <u>firings</u>;

8   converting the analog signals to digital data using an A/D converter;

9   preprocessing the digital data using a plurality of frequency band preprocessors; [[and]]

10   generating positional data responsive to the preprocessed digital data<u>; and</u>

11   <u>generating image data using the positional data, the image data having no visible</u>

12   <u>temporal anomalies.</u>

1   4. (currently amended) The method of claim 3, wherein digital data resulting from an

2   individual member of the ~~plurality~~ single set of ultrasound ~~pulses~~ pulse firings is

3   processed using a plurality of imaging modes.

1   5. (cancelled)

1   6. (currently amended) The method of claim 3, wherein ~~the step of~~ preprocessing the digital

2   data is preprocessed in parallel.

1   7. (original) The method of claim 3, wherein the positional data is generated using echo-

2   forming.

1   8. (original) The method of claim 3, wherein the positional data is generated using echo-

2   forming and the echo-forming uses an area-forming module that includes a plurality of

3   area-formers.

1   9. (currently amended) The method of claim 3, further ~~including the step of~~ comprising

2   providing preprocessed digital data to one or more members of a plurality of area-

3   formers from one or more members of the plurality of frequency band preprocessors.

1   10. (currently amended) The method of claim [[6]] 3, further ~~including the step of~~ comprising

2   providing the positional data to an image scan converter, wherein the positional data is

3   generated using a plurality of imaging modes.

1   11. (currently amended) The method of claim 10, further ~~including the step of~~ comprising

2   generating image data using the image scan converter and the positional data.

1   12. (currently amended) The method of claim 10, further ~~including the step of~~ comprising

2   generating image data using the image scan converter and the positional data, wherein

3   the image data is visibly temporally synchronized.

1   13. (currently amended) The method of claim [[6]] 3, wherein ~~the step of~~ preprocessing the

2   digital data is performed using a plurality of imaging modes.

1   14. (original) The method of claim 13, wherein the plurality of imaging modes includes

2   Doppler imaging.

1   15. (original) The method of claim 13, wherein the plurality of imaging modes includes

2   imaging using harmonic frequencies.

1   16. (currently amended) The method of claim 3, wherein ~~the step of~~ preprocessing the digital

2   data is done in parallel, and

3   the plurality of frequency band preprocessors are responsive to encoding within the

4   digital data.

1   17. (currently amended) The method of claim 3, further ~~including the step of~~ comprising post-

2   processing the positional data in parallel using a plurality of post-processors.

1   18. (currently amended) An ultrasonic analysis system comprising:

2   an ultrasound transducer for transmitting a single set of ultrasound ~~pulses~~ pulse firings

3   into a media of interest such that the media of interest modifies the ultrasound

4   ~~pulses~~ pulse firings;

5   a transducer for receiving the modified ultrasound ~~pulses~~ pulse firings and generating

6   signals responsive to the modified ultrasound ~~pulses~~ pulse firings;

7   a plurality of frequency band preprocessors for preprocessing the signals in parallel; ~~and~~

8   an echo-forming system for generating positional data responsive to the preprocessed

9   signals[.]; and

10   an image converter system for generating image data using the positional data, the

11   image data having no visible temporal anomalies.

1   19. (original) The system of claim 18, wherein the echo-forming system includes a plurality of

2   beamformers configured to receive signals preprocessed using a plurality of imaging

3   modes.

1   20. (original) The system of claim 18, wherein the echo-forming system includes an area-

2   forming module.